

Bridge-cum-Bandhara at the
proposed sites for bridges and
Kolhapur type of weirs in the State.

Government of Maharashtra ,
Irrigation department,
Government Circular No.MISC 1089/337-MI-2
Mantralaya Bombay No32 BR
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C I R C U L A R

There is a persistent demand from the peoples representatives for taking up Bridge-cum Bandhara works in the State , on large scale.Government in Public works department has issued Circular No.PLN 1075 (B-cum-B) --3(38-A)-D 30, dated the 24th March 1976 (Copy enclosed) and accordingly such works have been executed at few locations in the past. In order to take up such schemes on large scale and to achieve proper co-ordination between Irrigation Department and Public Works Department for these works, following modified orders are issued:-

- (1.) Bridge-cum-Bandharas can be taken up if it satisfies the required criteria laid down for Kolhapur type weir, even if the depth of foundation is upto 3mtrs. However in case some protection is required to be provided in the bed on the down stream of such Bandhara, provision for the same should be made in the estimate by the Irrigation Department.
- (2.) The Condition of minimum clearance of 3 mtrs. Between full supply level over the Bridge-cum-Bandhara and the soffit of the slab of the bridge should be relaxed in case of a submersible bridge, and minimum clearance of 2 mtrs. shoUld be kept between Full Silt Level of Bandhara and soffit of the slab of the bridge. However , in case of high level bridge, this free board should be minimum 3 mtrs.
- (3.) Bridge-cum-Bandhara type structure should not be provided on National Highways, other very important roads and railway affecting works. Similarly, such Bandharas should not be constructed in the forest area as well as in the proximity of the forest area, since the clearance between FSL and soffit of the slab being less, floating trees and debris can endanger the bridge structure.
- (4.) Wherever it is possible to make use of a proposed bridge for Kolhapur type weir or whenever it is possible to widen the roadway on a proposed Bandhara for the use of traffic instead of constructing a separate bridge, only such Bridge-cum-Bandhara should be proposed so that by constructing such a joint structure, economy can be achieved . Very high level bridge may not be considered as suitable for the proposal of bridge-cum bandhara on account of difficulty of removal and resetting of planks from great hight.
- (5.) For converting an existing bridge into a Bridge-cum-Bandhara, complete cost of Bandhara and allied work involving protection of bed on down stream side should be included in the Bandhara estimate and the expenditure for this conversion should be borne by the Irrigation Department. Whenever any new bridge is proposed by Public works Department, consultation should be done with Irrigation Department to explore the possibility of taking up the work of Bridge-cum-Bandhara. If feasible, the Public Works Department should formulate such a proposal to accord administrative approval to the same and

complete the work. The entire expenditure in carrying out the work in such case should be borne by the Public Works Department initially and extra expenditure involved in constructing the work of Bandhara along with the bridge should be borne by the Irrigation department and reimbursed to public Works Department in due course of time. Whenever Bandhara work is proposed by the Irrigation Department (which is within cost norms of Irrigation Department) on or nearby any plan road, the concerned officer of Irrigation Department should consult the officer of the Public Works Department to explore the possibility of providing Bridge-cum-Bandhara structure. In case the proposal is found to be feasible the project should be prepared by the Irrigation Department in consultation with the Public Works Department. Administrative approval for the same should be accorded by the Irrigation Department and execution of such a structure and the entire expenditure of the same should be borne by the Irrigation Department initially and the extra expenditure involved in construction of extra width for bridge portion of the Bandhara-cum-Bridge should be reimbursed by the Public Works Department to the Irrigation Department in due course of time.

- (6.) The maintenance and repairs of Bandhara and also placing of needless in position at appropriate time and removing the same before monsoon will be done by Irrigation Department. The maintenance and repairs of bridge portion will be done by Public Works Department.
- (7.) Some times, while upgrading the existing road to a higher category, geometric improvements are carried out and existing stretch is abandoned along with the bridge there and a new bridge is proposed on improved alignment in lieu of existing bridge on the abandoned portion. In such a case, following arrangements are suggested for utilising the existing bridge on abandoned portion for storing water. The expenditure in such case should be borne by the Irrigation Department including future maintenance of structure. However before taking any work it should be ascertained from Executive Engineer of Public Works Department whether the old bridge is to be demolished or otherwise. In case the new bridge is on the down stream of the old existing bridge no difficulty will arise for utilising the existing bridge for storing of water by converting it into a bridge-cum bandhara . However, in case the new bridge is on the up stream side of the old existing bridge, the guiding principle should be that distance between the two should not be too less. Each case for such a proposal should be decided on it's merit and Irrigation Department should handle such a proposal in consultation with Public Works Department and it should be seen by the Irrigation Department that the information to Public Works Department is sent in the form of check list prepared by the Public Works Department and copy of such a check list should be sent by the concerned Executive Engineer of Irrigation Department to the Superintending Engineer, Design's Circle (Bridges), Konkan Bhavan, Public Works Department, New Bombay and to the concerned Executive Engineer of Public Works Department. For this the Superintending Engineer , Design's Circle (Bridges)Public Works Department should propose and Circulate to all Executive Engineers/ Superintending Engineers/ Chief Engineers of public Works Department/ Irrigation Department a suitable checklist.

(8.) It is not desirable to close RCC slab/ pipe culverts on State highways, District Roads and Other District Roads by putting planks for storage of water at the end of rainy season because of following reasons:-

- (a) There is a possibility of rendering considerable damage to the road on account of overtopping of roads by water due to unseasonable rains.
- (b) Such storage will be very small and whatever water is stored will either percolate through bed material or get lost due to evaporation.
- (c) Such small works will be scattered over large area and maintenance of such works will be difficult.

(9.) Whenever survey and investigation are completed by Public Works Department for a bridge, before taking detailed plans and estimates in hand, the concerned Executive Engineer of Road Project Division, Public Works Department should consult the Executive Engineer of Irrigation Department by giving him complete information of such proposals and the possibility of construction of Bridge-cum- Bandhara should be explored and then the plans and estimates for such bridge works should be finalized. The technical sanction authority should verify the compliance of this requirement before according technical sanction.

(10.) At the locations wherever the Irrigation Department has proposed Kolhapur type weir and after investigation of the same has been completed , complete information of such proposals should be sent by the concerned Executive Engineer of Irrigation Department to the concerned Executive Engineer of the Road Project Division of Public Works Department and possibility of constructing Bridge-cum- Bandhara should be explored. In case, such proposals are found to be feasible, they should be thoroughly investigated and then only the Bandhara proposals should be finalized . While sending proposal of Kolhapur type weir for obtaining administrative approval , the fact regarding consultation made with the Public Works Department should be specifically mentioned in the proposals.

This Circular is issued with the concurrence of the Public Works Department.

Sd/-
(S.D.Deshpande),
Under secretary to the Government of Maharashtra,
(M.I.), Irrigation Department